REMARKS

In the present Amendment, claim 1 has been amended to incorporate the subject matter of claim 4. Claim 4 has been cancelled. Further, claim 13 has been canceled in view of the cancellation of claim 4. No new matter has been added, and entry of the Amendment constituting a combination of existing claims as placing the present application in condition for allowance is respectfully requested.

Upon entry of the Amendment, claims 1-3, 6-12 and 15-18 will be pending.

Initially, the Examiner states that Applicants' amendment necessitated the new grounds of rejection presented in this Office Action. Accordingly, the Action is made final.

Applicants respectfully disagree.

Applicants merely combined claims 1 and 5, amended claims 6 and 7 to depend from claim 1 and cancelled claim 5 and 14, in the Amendment filed July 21, 2008. Amended claim 1 as presented in the July 21, 2008 Amendment had the same scope as original claim 5, which the Examiner should have considered previously. However, the Examiner newly cited two references in the present Action to reject the feature of claim 5 incorporated into claim 1 (see, e.g., page 3, lines 5-10 in the Office Action). Accordingly, the finality of the present Action is premature and inappropriate. **The Examiner is respectfully requested to withdraw the finality of the present Action.**

At page 2 of the Action, the Examiner states that Applicants' amendment did not overcome the Double Patenting rejection, since the limitation of the oil is found in claim 8 of U.S. Patent No. 6,939,910.

Without admitting that this double patenting rejection is proper, Applicants submit herewith a Terminal Disclaimer to obviate the rejection.

In paragraph No. 2 of the Action, claims 1-4, 6-13 and 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Imai (US 4,360,049) in view of Rawlinson et al (US 2002/0198296).

Applicants submit that this rejection should be withdrawn because Imai and Rawlinson et al do not disclose or render obvious the present invention, either alone or in combination.

Imai was cited as disclosing a rubber composition consisting of 100 parts by weight of a rubber component, 5-60 parts by weight of a liquid polymer having a viscosity average molecular weight of 2,000-150,000 and 40-90 parts by weight of carbon black (abstract and col. 2, lines 53-64). In the Examples of Imai, 10 parts by weight of aromatic oil are employed (Table 5 at col. 8).

Rawlinson et al is newly cited as teaching a rubber composition for use in tire tread comprising hydrogenated naphthenic oils having DMSO extraction of less than 3 wt % (abstract, [0024]-[0025]).

Mineral oils that contain a DMSO extract in an amount of less than 3 wt % can be MES, TDAE as well as mineral oils such as naphthenic oils or hydrogenated naphthenic oils ([0025]).

However, Rawlinson et al discloses that the *disadvantage* of adding the special mineral oil such as TDAE and MES to styrene-butadiene and butadiene rubbers is that the rubbers suffer a deterioration in quality, in particular as regards wet-skid behavior, which means that such rubber mixtures are not particularly suitable for use in producing, for example, tire treads ([0002]-[0004]).

The invention of Rawlinson et al is directed to *particular rubber mixtures* comprising a) a non-polar rubber; b) a terpolymer comprising an olefinically unsaturated nitrile, a vinyl aromatic

compound and a conjugated diene; and c) a mineral oil that contains a DMSO extract in an amount of less than 3 wt %, which have an improved wet-skid behavior ([0007]-[0010]).

Accordingly, Rawlinson et al *teaches away* from adding the special mineral oil such as TDAE and MES to styrene-butadiene and butadiene rubbers. And Rawlinson et al does not teach that addition of oils to such compositions improves wet skid behavior as compared to the rubbers which do not have such oil, as asserted by the Examiner.

Since the rubber composition of Imai consists essentially of styrene-butadiene, polyisoprene rubber and butadiene rubbers, one skilled in the art would not have been motivated to add the special mineral oils taught by Rawlinson et al to the rubber composition of Imai.

Further, Imai and Rawlinson et al do not teach or suggest that the rubber composition comprising all of (1) T-DAE or MES, (2) the hydrogenated naphthenic oil and (3) the liquid polymer, as required by the present claims.

Still further, as shown in Table 1 at page 8 of the specification, the compositions of Examples 1-3 of the invention considerably improve the tensile strength and wear resistance while maintain the modulus of elasticity, as compared with Comparative Examples 1 and 2. In Comparative Example 1, only aromatic oil was employed, no oil with an extraction quantity with dimethylsulfoxide (DMSO) by IP346 process of less than 3% by mass and no liquid polymer. In Comparative Example 2, TDAE and a blend of hydrogenated naphthenic oil and asphalt were employed, but no liquid polymer.

That is, according to the present invention, the oil having an extraction quantity with DMSO of less than 3% by mass and the specified liquid polymer are compounded with the rubber composition, whereby there can be provided a rubber composition for a tread considerably improving the tensile strength and wear resistance while maintaining the modulus

of elasticity, as compared with the conventional rubber composition using the aromatic oil and a tire using the same.

Imai and Rawlinson et al do not teach or suggest such superior results provided by the present invention.

In view of the above, reconsideration and withdrawal of the §103(a) rejection based on Imai in view of Rawlinson et al are respectfully requested.

In paragraph No. 3 of the Action, claims l-4, 6-13 and 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Imai in view of Sohnen et al (US 2002/0045697).

Applicants submit that this rejection should be withdrawn because Imai and Sohnen et al do not disclose or render obvious the present invention, either alone or in combination.

The Examiner contends that Sohnen et al discloses a rubber composition for use in tire tread and hydrogenated naphthenic oils having DMSO extraction of less than 3 wt % (citing paragraph [0025]).

Sohnen et al discloses that adding softeners for rubber compositions containing carbon black that are selected from esters, naphthenic oils, etc. and further adding a liquid polymer results in vulcanisates having the *disadvantage* of leaving black markings on the surfaces due to friction. Additionally, problems in processing arise in such rubber compositions and the specific components of the compound cannot easily be homogeneously mixed and oily perspiration is discernible on the vulcanized products. See Sohnen et al in [0007].

That is, Sohnen et al *teaches away* from adding softeners such as naphthenic oils to rubber compositions containing carbon black in general.

The invention of Sohnen is directed to a sulfur vulcanizable rubber composition which does not contain aromatic process oils that has, as a softener 5 to 60 phr of at least one mineral

oil softener having a content of polycyclic aromatic compositions of less than 3 wt%, determined with the DMSO extract according to the IP 346 method, with respect to the total weight of the mineral oil softener, and a glass transition temperature below -45 °C, and contains 1 to 20 phr of at least one glyceride and/or factice, and has a weight ratio of finely dispersed, precipitated silica to carbon black of 1:2 to 20:1 ([0010]).

Further, Sohnen et al discloses that the *special combination* of the mineral oil softeners with glycerides and/or factices according to their invention and *the ratio of silica to carbon black* can be processed and mixed without aromatic process oils to provide advantages ([0025]).

That is, Sohnen does not teach that addition of [hydrogenated naphthenic] oil to such compositions improves wet skid behavior as compared to the rubbers which do not have such oil, as asserted by the Examiner.

Since the rubber composition of Imai contains 40-90 parts by weight of carbon black, one skilled in the art would not have been motivated to add hydrogenated naphthenic oil to the rubber composition of Imai, in view of the teachings of Sohnen et al.

Further, Imai and Sohnen et al do not teach or suggest that the rubber composition comprising all of (1) T-DAE or MES, (2) the hydrogenated naphthenic oil and (3) the liquid polymer, as required by the present claims.

Still further, Imai and Sohnen et al do not teach or suggest the superior results provided by the present invention.

In view of the above, reconsideration and withdrawal of the §103(a) rejection based on Imai in view of Sohnen et al are respectfully requested.

In paragraph No. 4 of the Action, claims l, 2, 4, 6-8, 10-13 and 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto (EP 0 939,104) in view of Rawlinson et al and evidence provided in Imai.

In paragraph No. 6 of the Action, claims l, 2, 4, 6-8, 10, 11, 13, 15, 16 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Russell (GB 2,239,870) in view of Rawlinson et al and evidence provided in Imai.

In paragraph No. 8 of the Action, claims l-4, 6-13 and 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakayama (US 4,840,988) in view of Rawlinson et al and evidence provided in Imai.

Applicants submit that the above three rejections should be withdrawn for substantially the same reasons that the rejection based on Imai in view of Rawlinson et al should be withdrawn, as discussed above.

Hashimoto is cited as disclosing a rubber composition comprising 100 parts by weight of a rubber component (natural or synthetic) and 1 to 120 parts by weight of a softening agent containing 0.1 to 4% by weight of asphaltene (abstract and [0006]).

Russell is cited as disclosing a rubber mixture composition containing a liquid polymeric material and/or one or more asphaltenes present in 1 to 50 parts per 100 parts rubber (Claim 1 and rubber mixture B at page 4).

Nakayama is cited as disclosing a rubber composition containing a softening agent and carbon black. The softening agent contains liquid polymer or liquid polymer with naphthene oil (Claim 1 and the Table at cols. 1 and 2).

As discussed above, Rawlinson et al teaches away from adding the special mineral oil such as TDAE and MES to styrene-butadiene and butadiene rubbers. And Rawlinson et al does

not teach that addition of oils to such compositions improves wet skid behavior as compared to the rubbers which do not have such oil, as asserted by the Examiner.

Accordingly, one skilled in the art would not have been motivated to add the special mineral oils taught by Rawlinson et al to the rubber composition of Hashimoto, or Russell or Nakayama.

In addition, with respect to the rejection including Hashimoto, Hashimoto does not teach or suggest "(b) 5-40 parts by mass of a liquid polymer having a viscosity average molecular weight of 45,000-100,000 based on 100 parts by mass of a rubber component" recited in present Claim 1.

In paragraph No. 5 of the Action, claims l, 2, 4, 6-8, 10-13 and 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto (EP 0 939,104) in view of Sohnen et al and evidence provided in Imai.

In paragraph No. 7 of the Action, claims l, 2, 4, 6-8, 10, 11, 13, 15, 16 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Russell in view of Sohnen et al and evidence provided in Imai.

In paragraph No. 9 of the Action, claims l-4, 6-13 and 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakayama in view of Sohnen et al and evidence provided in Imai.

Applicants submit that the above three rejections should be withdrawn for substantially the same reasons that the rejection based on Imai in view of Sohnen et al should be withdrawn, as discussed above.

As noted, Sohnen et al teaches away from adding softeners such as naphthenic oils to rubber compositions containing carbon black and Sohnen et al does not teach that addition of oils

to such compositions improves wet skid behavior as compared to the rubbers which do not have such oil.

Accordingly, it would not have been obvious to combine the teachings of Hashimoto or Russell or Nakayama, with the teachings of Sohnen et al.

Allowance is respectfully requested. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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